NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 1.1: Where do data come from?

**Individual =**

**Variable =**

**Categorical Variables: Quantitative Variables:**

**Example: Colleges/Universities**

**CATEGORICAL QUANTITATIVE:**

The following is a segment of census data from the Greenwich Village area of New York City from the 2000 US Census.



Who are the individuals?

What are the variables? Label each as Quantitative(Q) or Categorical(C).

**Population =**

**Sample =**

**Example: Ratings on TV shows**

**Examples:**

1. A Philadelphia city council member is interested in how Philadelphian's like the smoking ban of restaurants and bars. During her lunch hour she heads to her favorite restaurant and asks all the patrons if they like the smoking ban.
2. Population of interest:
3. Sample:
4. Variables(Categorical or Quantitative):
5. Do you think the results of this sample accurately reflect the feelings of the population? Explain.
6. An environmental scientist interested in pollution of the Delaware River canoes up the river and takes a water sample every 30 minutes of his 4 hour trip. Each sample is cataloged where and when it was taken. In a laboratory he measures the amount of pollutants and oxygen level of each sample.
7. Population of interest:
8. Sample:
9. Variables(Categorical or Quantitative):
10. Do you think the results of this sample accurately reflect the population? Explain.
11. ESPN wants to know who American’s think will win the Super Bowl. On their website they put a quick survey question in which a person is asked who they believe will win the Super Bowl. The person then makes a choice between the two teams and it is submitted to ESPN.
12. Population of interest:
13. Sample:
14. Variables(Categorical or Quantitative):
15. Do you think the results of this sample accurately reflect the population? Explain.

**Observational Study =**

* **Sample Survey =**

**Experiment =**

**Census**

Read over p. 10-11 and answer the following questions:

1. What is a census?
2. What are some disadvantages of a census?
3. What are some advantages of a census?
4. Why is sampling preferred over taking a census?
5. Come up with an example of situation in which it would probably be ok to take a census.

**Book problems:**